NVIDIA RTX Spark: How MediaTek and NVIDIA Are Redefining AI PCs

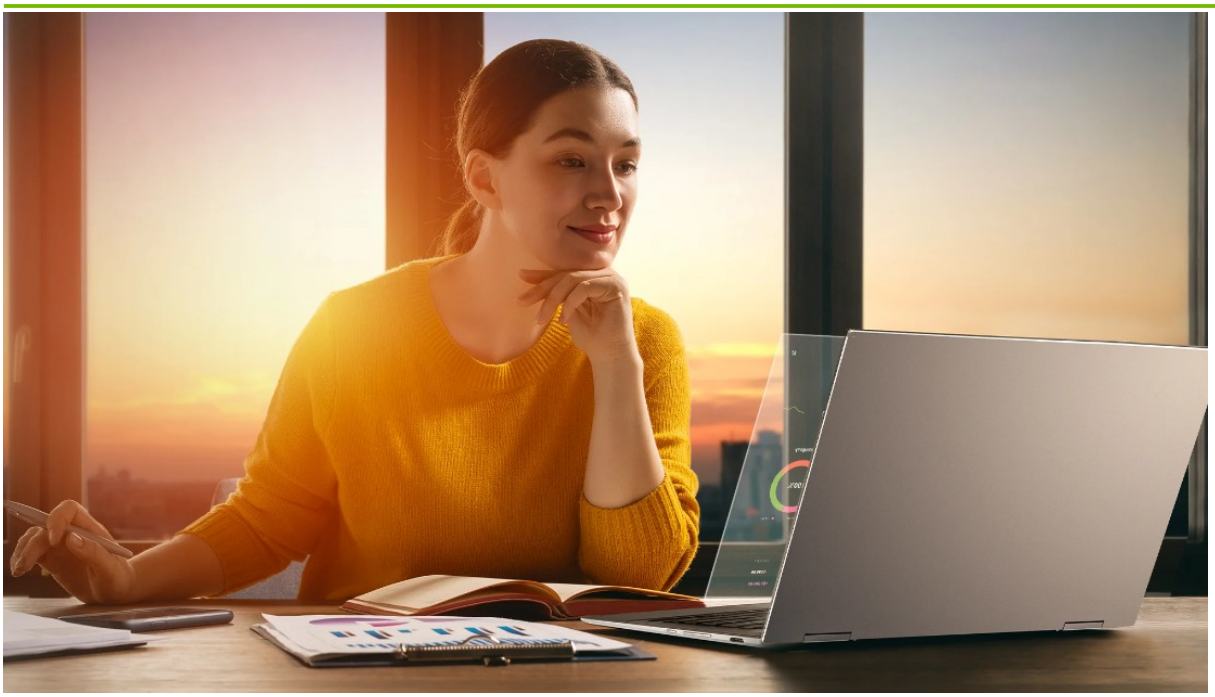
The personal computing experience has transformed with the integration of AI. Business buyers no longer compare devices based solely on clock speeds; they also want systems that can process AI locally, deliver all-day battery life, and remain connected wherever they go.

MediaTek's personal computing lineup, plus its new RTX Spark collaboration with NVIDIA, is built around exactly that shift. This is a major shift towards an AI-based computing experience.

Android Computing Sets the Foundation

MediaTek already powers a large share of the world's Chromebooks and tablets.

This matters for B2B fleets because **Android computing** devices are often the first pick for schools, field teams, and frontline workers who need dependable, secure, and low-cost hardware at scale.

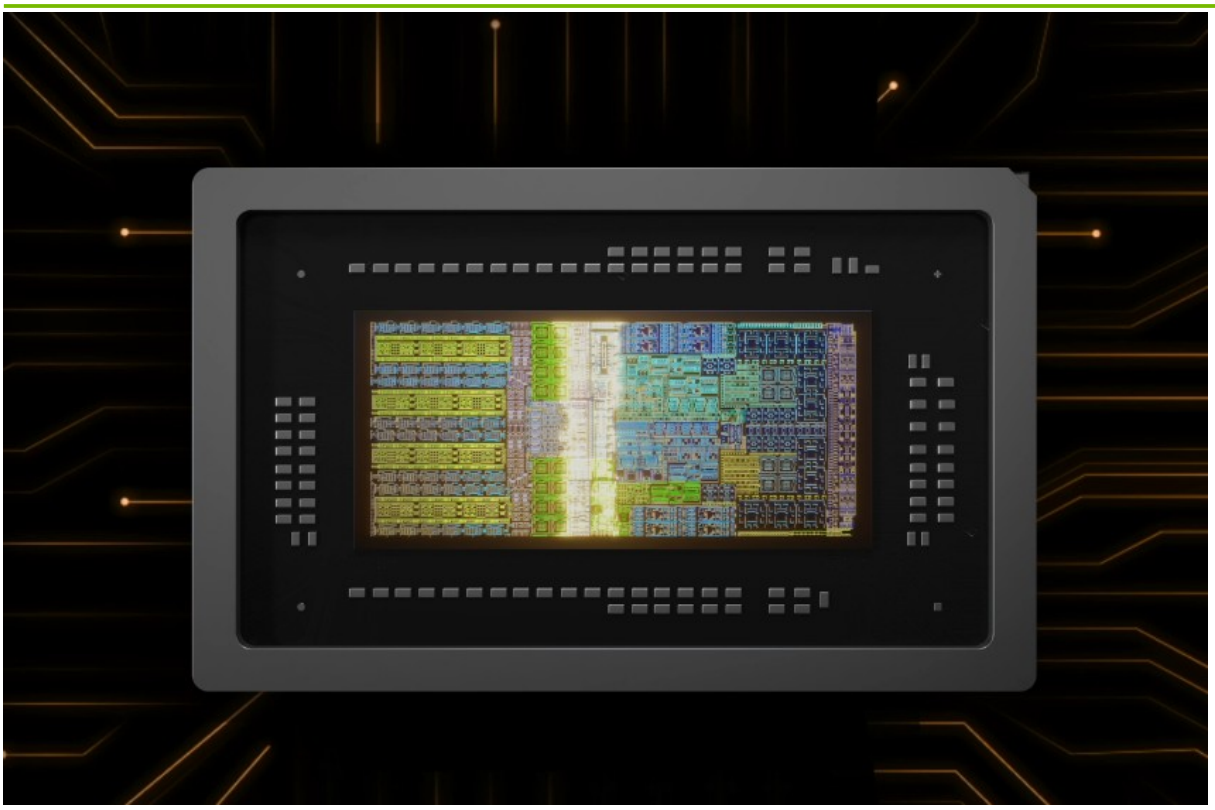


If you must know, MediaTek already manufactures Arm-based Chromebooks and Android tablets.

Why Edge AI Computing Is the New Standard

More business workloads are now running directly on the device instead of the cloud. This change is called **edge AI computing**. To power this transition, MediaTek integrates dedicated Neural Processing Units (NPUs) directly into its chipsets.

These AI processors let devices handle tasks like translation, transcription, or document summaries without sending anything to the cloud. This means no cloud dependency.

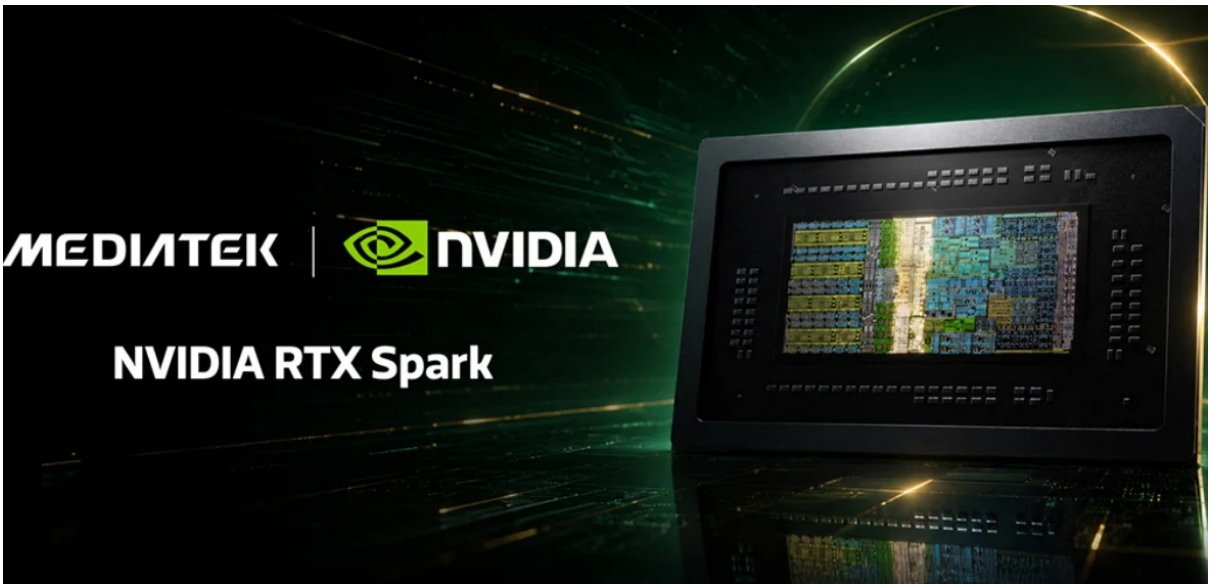


This matters most in regulated industries. For example, a hospital can run patient intake tools locally without moving sensitive data off the device. A bank branch can process forms on-site instead of routing them through external servers.

> This is why **AI edge devices** are quickly becoming the default choice for enterprise fleets that care about speed and data privacy.

RTX Spark: A New Class of AI PC

To transform the AI computing experience, MediaTek and NVIDIA have collaborated and built the RTX Spark. It combines MediaTek's CPU design and power efficiency with NVIDIA's full-stack AI platform and RTX graphics technology.



RTX Spark represents one of the first **high-performance computing processors** designed for a brand-new category: compact, efficient PCs built for AI agents, creators, and gamers rather than traditional desktop workloads alone.

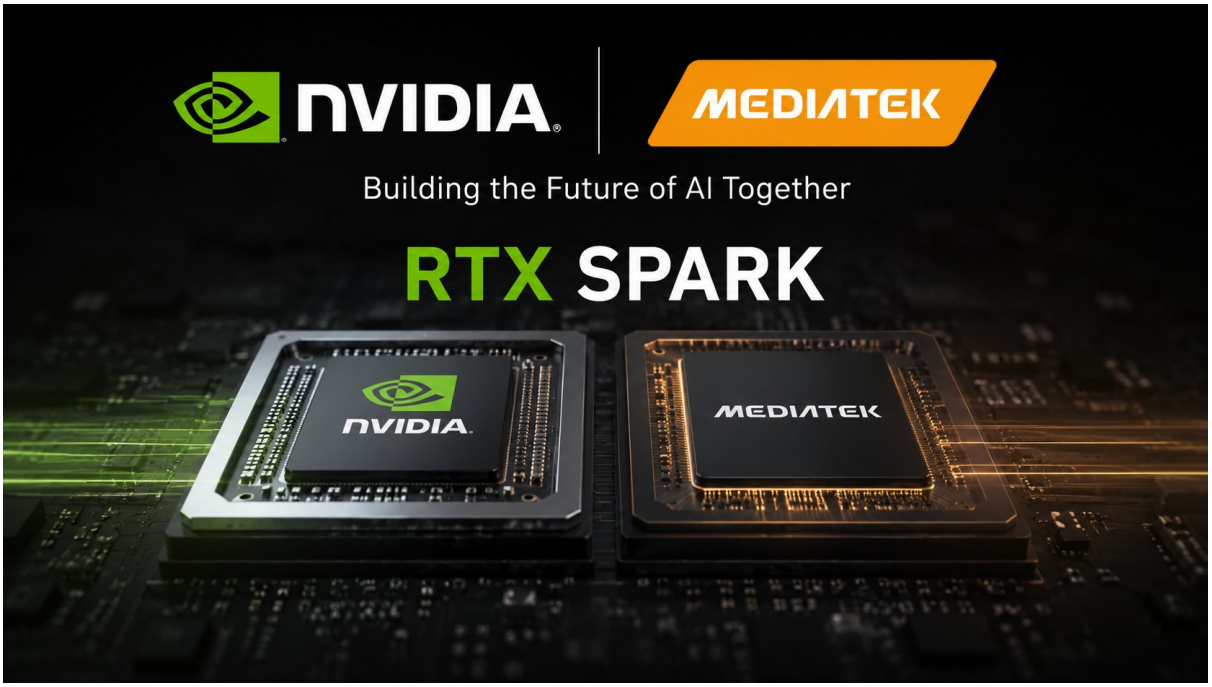
RTX Spark Specifications:

- Up to a 6,144-core Blackwell RTX GPU
- Up to 20 CPU cores
- Up to 1 petaflop of FP4 AI performance
- Up to 128GB of unified memory

Earlier, this kind of memory and compute used to live inside a server rack. Now it can fit on a desk in the form of an AI-powered Windows PC or a slim laptop.

Bringing Workstation Power to the Desktop

This is where the **RTX Spark workstation** comes in. It compresses supercomputer-level AI performance into a chassis small enough for a slim laptop or a compact desktop.



Because CUDA (Compute Unified Device Architecture) runs natively on the platform, engineering and software teams already invested in NVIDIA's ecosystem can move existing pipelines to an **RTX Spark computer** without rewriting their tools from scratch.

A few real examples show why this matters:

- A video production studio can run local AI color grading and rough-cut tools on an RTX Spark workstation, cutting cloud rendering costs significantly.

- An architecture firm can present ray-traced, photorealistic 3D walkthroughs on a laptop during a client pitch, with no rendering farm required.
- A product team building AI agents can prototype and test locally before scaling workloads to the cloud, shortening development cycles.

What the RTX Spark Means for OEMs

MediaTek and NVIDIA are pushing **high-performance computing processors** in a new direction, one focused on efficiency, on-device AI, and constant connectivity rather than raw specs alone.

For OEMs, RTX Spark opens a new product category between ultraportable laptops and full workstations. It also means fleets that can run agentic AI, creative applications, and everyday productivity tools without draining battery life or compromising data control.

As AI workloads keep moving from the cloud to the edge, RTX Spark positions MediaTek and NVIDIA to lead the next era of personal computing, one built for agents, creators, and the businesses that depend on them.

FAQs

What is NVIDIA RTX Spark?
RTX Spark is a new processor built jointly by MediaTek and NVIDIA for compact, AI-powered Windows PCs.

How is RTX Spark different from a regular laptop chip?
It combines MediaTek's efficient CPU design with NVIDIA's RTX graphics and AI technology to deliver workstation-level power in a slim device.

What are the key RTX Spark specifications?
It offers up to a 6,144-core Blackwell RTX GPU, 20 CPU cores, 1 petaflop of FP4 AI performance, and 128GB of unified memory.

Can RTX Spark run existing NVIDIA software?
Yes, it runs CUDA natively, so teams can use their current NVIDIA tools without rewriting them.